

Material Safety Data Sheet Issue Date: 02/11/03

Section 1: Chemical Product and Company Identification

Cat#: 86051 (Part of 86050 kit)

Part Name:BIOMAG PLUS PROTEIN G PARTICLES

Supplier:Polysciences, Inc.

400 Valley Road

Warrington, PA 18976

Telephone #215-343-6484

Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	fraction	in product
1	Iron oxide (Fe3O4)	001317619	0.005	
2	Water	007732185	0.995	

OSHA (ACGIH) Exposure Limits

CAS#:	TWA		STEL		CEILING	
	ppm	mg/m	ppm	mg/m3	ppm	mg/m3
001317619	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE
007732185	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are Polysciences' Inc. own assesments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
0	0	0

Section 4: First Aid Measures

Contact medical personnel.

Flush eyes with flowing water for at least 15 minutes.

If swallowed, wash out mouth with water if person is conscious.

Separate eyelids with finger tips.

Wash skin with deluge of water for at least 15 minutes.

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method:

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: no data

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

No special measures are indicated.

Section 7: Handling and Storage

Keep from freezing.

Store at 4 deg. C.

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves. No special protection is indicated.

Section 9: Physical and Chemical Properties

Formula: mixture vapor pressure: no data
Formula Weight: nap vapor density: no data
boiling point: 212 Specific gravity: 1
melting point: 32 ph: 7
solubility: dispersable appearance: brown opaque liquid

Section 10: Stability and Reactivity

Chemical Stability: stable
Conditions to Avoid: none
Incompatibility with other materials: none
Hazardous Decomposition Products: none
Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
001317619	not listed	not listed
007732185	not listed	not listed

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
001317619	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#
001317619 not listed

007732185 not listed

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)
This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
001317619	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
001317619	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
001317619	Not listed	Not listed
007732185	Not listed	Not listed

Section 16: Other Information

POLYSCIENCES, INC. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. POLYSCIENCES, INC. makes no representations or warranties, either expressed or implied of merchantability, fitness for particular purposes with respect to the information set forth herein or to which the information refers. Accordingly, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

Material Safety Data Sheet Issue Date: 03/04/03
Section 1: Chemical Product and Company Identification
Cat#: HBM56012
Part Name: PROTEIN A/G WASH/BINDING BUFFER
Supplier:Polysciences, Inc.
400 Valley Road
Warrington, PA 18976
Telephone #215-343-6484

Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	fraction	in product
1	Phosphoric acid, dipotassium salt	007758114	0.001	
2	Sodium azide	026628228	0.0008	
3	Sodium chloride	007647145	0.008	

4 Water 007732185 0.99

OSHA (ACGIH) Exposure Limits

CAS#	TWA			STEL		CEILING
	ppm	mg/m	ppm	mg/m3	ppm	mg/m3
007647145	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE
007732185	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE
007758114	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE
026628228	IDLH: --					
OS	NIOSH	--	--	--	--	--
ACGIH	--	--	--	--	0.11c	0.29d

Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are Polysciences' Inc. own assessments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
0	1	0

Section 4: First Aid Measures

Contact medical personnel if discomfort persists.

Flush eyes with flowing water for at least 15 minutes.

If swallowed, give 8 oz. of water or milk to drink. Never give anything by mouth to an unconscious person.

Separate eyelids with finger tips.

Wash skin with deluge of water for at least 15 minutes.

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method: no data

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: no data

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

No special measures are indicated.

Section 7: Handling and Storage

Store at 4 deg. C.

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental

equipment is to be considered as additional to safety glasses and gloves.
No special protection is indicated.

Section 9: Physical and Chemical Properties

Formula: mixture vapor pressure: no data
Formula Weight: nap vapor density: no data
boiling point: no data Specific gravity: 1
melting point: no data ph: no data
solubility: soluble appearance: clear colorless liquid

Section 10: Stability and Reactivity

Chemical Stability: stable
Conditions to Avoid: no data
Incompatibility with other materials: no data
Hazardous Decomposition Products: no data
Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
007647145	not listed	not listed
007732185	not listed	not listed
007758114	not listed	not listed
026628228	P105	Sodium azide

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
007647145	no	no
007732185	no	no
007758114	no	no
026628228	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	
007647145	not listed
007732185	not listed

007758114 not listed
026628228 FL MA MN PA WA

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)
This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc.	% Rep. Thres.
007647145	not listed	not listed	not listed
007732185	not listed	not listed	not listed
007758114	not listed	not listed	not listed
026628228	Sodium azide	1.0	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
007647145	not listed	not listed	not listed
007732185	not listed	not listed	not listed
007758114	not listed	not listed	not listed
026628228	Sodium azide (Na(N3))	500	1,000

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a

CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
007647145	Not listed	Not listed
007732185	Not listed	Not listed
007758114	Not listed	Not listed
026628228	Not listed	Not listed

Section 16: Other Information

POLYSCIENCES, INC. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or

accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

POLYSCIENCES, INC. makes no representations or warranties, either expressed or implied of merchantability, fitness for particular purposes with

respect to the information set forth herein or to which the information refers.

Accordingly, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS

Material Safety Data Sheet Issue Date: 03/04/03

Section 1: Chemical Product and Company Identification

Cat#: HBM56013

Part Name: PROTEIN A/G ELUTION BUFFER

Supplier:Polysciences, Inc.

400 Valley Road

Warrington, PA 18976

Telephone #215-343-6484

Section 2: Composition/ Information on Ingredients

Item#	Name	CAS#	fraction	in product
1	Glycine	000056406	0.07	
2	Sodium chloride	007647145	0.009	
3	Water	007732185	0.99	

OSHA (ACGIH) Exposure Limits

CAS#:		TWA		STEL	CEILING		
		ppm	mg/m	ppm	mg/m3	ppm	mg/m3
000056406		IDLH: NE					
	OS	NE	NE	NE	NE	NE	NE
	ACGIH	NE	NE	NE	NE	NE	NE
007647145		IDLH: NE					
	OS	NE	NE	NE	NE	NE	NE
	ACGIH	NE	NE	NE	NE	NE	NE
007732185		IDLH: NE					
	OS	NE	NE	NE	NE	NE	NE
	ACGIH	NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are Polysciences' Inc. own assessments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
0	1	0

Section 4: First Aid Measures

Contact medical personnel if discomfort persists.

Flush eyes with flowing water for at least 15 minutes.

If swallowed, give 8 oz. of water or milk to drink. Never give anything by mouth to an unconscious person.

Separate eyelids with finger tips.

Wash skin with deluge of water for at least 15 minutes.

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method: no data

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: no data

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

No special measures are indicated.

Section 7: Handling and Storage

Store at 4 deg. C.

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are

considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves. No special protection is indicated.

Section 9: Physical and Chemical Properties

Formula: mixture vapor pressure: no data
Formula Weight: nap vapor density: no data
boiling point: no data Specific gravity: 1.015
melting point: no data ph: no data
solubility: soluble appearance: clear colorless liquid

Section 10: Stability and Reactivity

Chemical Stability: stable
Conditions to Avoid: no data
Incompatibility with other materials: no data
Hazardous Decomposition Products: no data
Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
000056406	not listed	not listed
007647145	not listed	not listed
007732185	not listed	not listed

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
000056406	no	no
007647145	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	
000056406	not listed
007647145	not listed

007732185 not listed

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)
This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis conc. %	Rep. Thres.
000056406	not listed	not listed	not listed
007647145	not listed	not listed	not listed
007732185	not listed	not listed	not listed

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ(pounds)
000056406	not listed	not listed	not listed
007647145	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a

CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
000056406	Not listed	Not listed
007647145	Not listed	Not listed
007732185	Not listed	Not listed

Section 16: Other Information

POLYSCIENCES, INC. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or

accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose.

POLYSCIENCES, INC. makes no representations or warranties, either expressed or implied of merchantability, fitness for particular purposes with

respect to the information set forth herein or to which the information refers. Accordingly, POLYSCIENCES, INC. will not be responsible for

damages resulting from the use of or reliance upon this information.

END OF MSDS

Material Safety Data Sheet Issue Date: 03/04/03

Section 1: Chemical Product and Company Identification

Cat#: HBM56014

Part Name: NEUTRALIZATION BUFFER

Supplier:Polysciences, Inc.

400 Valley Road

Warrington, PA 18976

Telephone #215-343-6484

Section 2: Composition/ Information on Ingredients

Item# Name CAS# fraction in product

1 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-, hydrochloride 001185531
 0.016
 2 Water 007732185
 0.984

OSHA (ACGIH) Exposure Limits

CAS#	TWA			STEL		CEILING
	ppm	mg/m	ppm	mg/m3	ppm	mg/m3
001185531	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE
007732185	IDLH: NE					
OS	NE	NE	NE	NE	NE	NE
ACGIH	NE	NE	NE	NE	NE	NE

Section 3: Hazards Identification

Low hazard for usual industrial or commercial handling.

Hazard Ratings:

These ratings are Polysciences' Inc. own assessments of the properties of the material using the ANSI/NFPA 704 Standard.

Additional information can be found by consulting in the NFPA published ratings lists (List 325 and List 49).

If no data is listed the information is not available.

Health	Flammability	Reactivity
0	1	0

Section 4: First Aid Measures

Contact medical personnel if discomfort persists.

Flush eyes with flowing water for at least 15 minutes.

If swallowed, give 8 oz. of water or milk to drink. Never give anything by mouth to an unconscious person.

Separate eyelids with finger tips.

Wash skin with deluge of water for at least 15 minutes.

Section 5: Fire Fighting Measures

Flash point, deg F.: no data Method: no data

UEL: no data LEL: no data Autoignition temperature, deg. F.: no data

Flammability Classification: no data Flame Propagation Rate: no data

Hazardous Combustion Products: no data

Section 6: Accidental Release Measures

Any information listed below is to be considered in addition to internal guidelines for isolation of spill, containment of spill, removal of ignition sources from immediate area, and collection for disposal of spill by trained, properly protected clean up personnel.

No special measures are indicated.

Section 7: Handling and Storage

Store at 4 deg. C.

Section 8: Exposure Controls/ Personal Protection

The use of eye protection in the form of safety glasses with side shields and the use of skin protection for hands in the form of gloves are considered minimum and non-discretionary in work places and laboratories. Any recommended personal protection equipment or environmental equipment is to be considered as additional to safety glasses and gloves.

No special protection is indicated.

Section 9: Physical and Chemical Properties

Formula: mixture vapor pressure: no data
Formula Weight: nap vapor density: no data
boiling point: no data Specific gravity: 1.004
melting point: no data ph: no data
solubility: soluble appearance: clear colorless liquid

Section 10: Stability and Reactivity

Chemical Stability: stable
Conditions to Avoid: no data
Incompatibility with other materials: no data
Hazardous Decomposition Products: no data
Hazardous Polymerization: will not occur

Section 11: Toxicological Information

Acute Data: no data
Subchronic data: no data

Section 12: Ecological Information

no data

Section 13: Disposal Considerations

The following chart lists the status of the chemical and its components in reference to 40 CFR Part 261.33. If the product is listed by code number the substance may be subject to special federal and state disposal regulations. If no codes are listed the material must be disposed in compliance with all Federal, State and Local Regulations.

CAS#	Waste Code	Regulated Name
001185531	not listed	not listed
007732185	not listed	not listed

Section 14: Transportation Data

Refer to bill of lading or container label for DOT or other transportation hazard classification , if any.

Section 15: Regulatory Information

All components of this product are on the TSCA public inventory.

Prop 65 - Column A identifies those items which are known to the State of California to cause cancer. Column B identified items which are known to the State of California to cause reproductive toxicity.

CAS#	Column A	Column B
001185531	no	no
007732185	no	no

State Regulatory Information :If a CAS# is listed below this material is subject to the listed state right-to-know requirements.

CAS#	
001185531	not listed
007732185	not listed

SARA Toxic Release Chemicals(as defined in Section 313 of SARA Title III)

This list identifies the toxic chemicals, including their de minimis concentrations for which reporting is required under Section 313 of the Emergency

Planning and Community Right-to-Know Act (EPCRA). The list is also referred to as the Toxics Release Inventory (TRI) List.

CAS#	Regulated name	de minimis	conc. %	Rep. Thres.
001185531	not listed	not listed	not listed	
007732185	not listed	not listed	not listed	

SARA Extremely Hazardous Substances and TPQs

This list includes hazardous chemicals as defined in 29 CFR 1910.1200(c); and extremely hazardous substances regulated under Section 302 of SARA Title III with their TPQs (in pounds), as listed in 40 CFR 355, Appendices A and B.

CAS#	Regulated name	TPQ (pounds)	EHS-RQ (pounds)
001185531	not listed	not listed	not listed
007732185	not listed	not listed	not listed

CERCLA

The hazardous substances, and their reportable quantities (RQs) are listed in the federal regulations at 40 CFR Part 302, Table 302.4. Release of a CERCLA hazardous substance in an amount equal to or greater than its RQ, in any 24-hour period, must be reported to the National Response Center at (800) 424-8802.

CAS#	Regulated name	RQ (pounds)
001185531	Not listed	Not listed
007732185	Not listed	Not listed

Section 16: Other Information

POLYSCIENCES, INC. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. POLYSCIENCES, INC. makes no representations or warranties, either expressed or implied of merchantability, fitness for particular purposes with respect to the information set forth herein or to which the information refers. Accordingly, POLYSCIENCES, INC. will not be responsible for damages resulting from the use of or reliance upon this information.

END OF MSDS